

Amendments to the Claims:

1. (Currently amended) A process for operating a blue flame burner comprising:
providing a blue flame burner adapted for domestic heating with ~~fuel comprising a~~
Fischer-Tropsch-derived fuel comprising about 40 wt.% or more of a Fischer
Tropsch product comprising 80 wt.% or more of iso-paraffins and normal
paraffins; and,
burning the fuel under conditions effective to produce an amount of energy and flue
gasses; and,
performing one or more procedure selected from the group consisting of heating water
with the flue gasses by indirect heat exchange in a boiler and directly heating a
space with the flue gasses.
2. (Previously presented) The process of claim 1 wherein the conditions comprise a value
of lambda in a range of between about 1 and about 1.6.
3. (Previously presented) The process of claim 2 wherein the value of lambda is in a range
of between about 1.05 and about 1.2.
4. (Previously presented) The process of claim 1 wherein the one or more procedure is
heating water with the flue gasses by indirect heat exchange in a boiler.
5. (Previously presented) The process of claim 1 wherein the one or more procedure is
directly heating a space with the flue gasses.
6. (Currently amended) The process of claim 1 wherein 90 wt.% or more of the
Fischer-Tropsch-derived fuel boils at a ~~first~~-temperature in a ~~first~~-range of between about 160 °C
and about 400 °C.
7. (Currently amended) The process of claim ~~[[6]]~~1 wherein 90 wt.% or more of the
Fischer-Tropsch-derived fuel boils at a ~~second~~-temperature in a ~~second~~-range of between about
160 °C and about 370 °C.
8. (Currently amended) The process of claim 1 wherein the Fischer-Tropsch-derived fuel
comprises a ~~Fischer-Tropsch product that contains about 80 wt % or more of iso-paraffins and~~
~~normal paraffins~~, about 1 wt % or less of aromatics, about 5 ppm or less of sulfur, and about 1
ppm or less of nitrogen, and wherein the Fischer-Tropsch product has a density of between about

0.65 g/cm³ and about 0.8 g/cm³ at about 15 °C.

9. (Currently amended) The process of claim 1 wherein the Fischer-Tropsch-derived fuel comprises about 80 wt % or more of ~~[[a]]~~the Fischer-Tropsch product.
10. (Previously presented) The process of claim 9 wherein the Fischer-Tropsch-derived fuel comprises one or more of a mineral oil fraction and a non-mineral oil fraction.
11. (Previously presented) The process of claim 1 wherein the Fischer-Tropsch-derived fuel comprises one or more additives.
12. (Previously presented) The process of claim 11 wherein the Fischer-Tropsch-derived fuel further comprises an odor marker.
13. (Previously presented) The process of claim 11 wherein the Fischer-Tropsch-derived fuel further comprises a color marker.
14. (Currently amended) A method for operating a blue flame burner, the method comprising:

supplying to the blue flame burner a liquid Fischer-Tropsch-derived fuel comprising about 40 wt.% or more of a Fischer Tropsch product comprising about 80 wt.% or more of iso-paraffins and normal paraffins~~to the blue flame burner;~~

supplying ~~an~~ oxygen-containing gas to the blue flame burner;

mixing the liquid Fischer-Tropsch-derived fuel and the oxygen-containing gas to form a combustible mixture;

feeding the combustible mixture to a pre-combustion space within the blue flame burner;

burning the combustible mixture utilizing the blue flame burner to produce flue gasses;

and

recycling at least a portion of the flue gasses externally of the blue flame burner to a

nozzle of the blue flame burner recirculating the portion of the flue gasses; and,

performing one or more procedure selected from the group consisting of heating water with the flue gasses by indirect heat exchange in a boiler and directly heating a space with the flue gasses.

15. (Canceled).
16. (Currently amended) A method for operating a blue flame burner, the method

comprising:

supplying to a blue flame burner a liquid Fischer-Tropsch-derived fuel comprising about 40 wt.% or more of a Fischer Tropsch product comprising about 80 wt.% or more of iso-paraffins and normal paraffins~~to the blue flame burner~~;

supplying ~~an~~ oxygen-containing gas to the blue flame burner;

mixing the liquid Fischer-Tropsch-derived fuel and the oxygen-containing gas to form a combustible mixture;

feeding the combustible mixture to a pre-combustion space within the blue flame burner;

burning the combustible mixture utilizing the blue flame burner to produce flue gasses;

and

recycling at least a portion of the flue gasses to a nozzle of the blue flame burner by swirling the combustible mixture within the blue flame burner recirculating the portion of the flue gasses; and,

performing one or more procedure selected from the group consisting of heating water with the flue gasses by indirect heat exchange in a boiler and directly heating a space with the flue gasses.

17. (Canceled)

18. (Currently amended) A method for operating a blue flame burner, the method

comprising:

supplying to the blue flame burner a liquid Fischer-Tropsch-derived fuel comprising about 40 wt.% or more of a Fischer Tropsch product comprising about 80 wt.% or more of iso-paraffins and normal paraffins~~to the blue flame burner~~;

supplying ~~an~~ oxygen-containing gas to the blue flame burner;

mixing the liquid Fischer-Tropsch-derived fuel and the oxygen-containing gas to form a combustible mixture;

burning the combustible mixture utilizing the blue flame burner; and

operating under conditions wherein λ comprises a ratio of a total amount of the oxygen-containing gas available for combustion to an amount of the oxygen-containing gas required to burn substantially all of the

Fischer-Tropsch-derived fuel, lambda having a value of about 1.6 or less; and, performing one or more procedure selected from the group consisting of heating water with the flue gasses by indirect heat exchange in a boiler and directly heating a space with the flue gasses.

19. (Previously presented) The method of claim 18 further comprising:
feeding the combustible mixture to a pre-combustion space within the blue flame burner;
recycling at least a portion of the flue gasses to a nozzle of the blue flame burner; and
operating under conditions wherein lambda has a value of 1 or more.
20. (Canceled).
21. (Previously presented) The method of claim 1 wherein the flue gasses comprise a reduced quantity of NO_x compared to the quantity of NO_x produced burning a non-Fischer-Tropsch-derived fuel under the same conditions.
22. (Previously presented) The method of claim 1 wherein the flue gasses comprise a reduced quantity of carbon monoxide compared to the quantity of carbon monoxide produced burning a non-Fischer-Tropsch-derived fuel under the same conditions.
23. (New) The process of claim 14 wherein the Fischer-Tropsch-derived fuel comprises about 1 wt % or less of aromatics, about 5 ppm or less of sulfur, and about 1 ppm or less of nitrogen, and wherein the Fischer-Tropsch product has a density of between about 0.65 g/cm^3 and about 0.8 g/cm^3 at about 15°C .
24. (New) The process of claim 15 wherein the Fischer-Tropsch-derived fuel comprises about 1 wt % or less of aromatics, about 5 ppm or less of sulfur, and about 1 ppm or less of nitrogen, and wherein the Fischer-Tropsch product has a density of between about 0.65 g/cm^3 and about 0.8 g/cm^3 at about 15°C .
23. (New) The process of claim 16 wherein the Fischer-Tropsch-derived fuel comprises about 1 wt % or less of aromatics, about 5 ppm or less of sulfur, and about 1 ppm or less of nitrogen, and wherein the Fischer-Tropsch product has a density of between about 0.65 g/cm^3 and about 0.8 g/cm^3 at about 15°C .